

Virginia's Integrated Database-GIS Module

Virginia Department of
Environmental Quality



Search for Approved TMDL Reports

To return all records, simply click the Search button without entering any criteria.

Watershed ID	<input type="text"/>	example searches: B17R, b, 17, r
Waterbody Name	<input type="text"/>	example searches: Opequon Creek, OPEQUON, op
City/County	<input type="text"/>	example searches: Albemarle, ALB, albem
Major River Basin	<input type="text"/>	
Pollutant	<input type="text"/>	
EPA Approval Date (Year)	<input type="text"/>	
SWCB Approval Date (Year)	<input type="text"/>	
<input type="button" value="Search"/> <input type="button" value="Clear form"/>		



Draft TMDL Reports

The table below lists draft TMDLs completed to date. It contains TMDLs being revised to address public comments prior to submission to the EPA for approval and those already submitted. The TMDLs are sorted by End of Public Comment Period date. To view a TMDL document (in PDF format), click on the highlighted segment.

TMDL Project	City/County	Watershed ID	Impairment	End of public comment period
Clinch River, Coal Creek, Middle Creek, Plum Creek	Tazewell	P01R, P02R, P03R	Bacteria, Sediment, TDS	01/21/2011
Accotink Creek	Fairfax, Vienna	A15R	Stormwater Flow	08/20/2010
Beaver Creek Watershed	Campbell	H05R	Bacteria	04/23/2010
Milldam Creek, West Neck Creek (middle), Nawney Creek	Virginia Beach, Chesapeake	K41R, K42E	Dissolved Oxygen	03/31/2010
Powell River and North Fork Powell River Watersheds	Lee, Wise	P17R, P20R	Bacteria, Benthic	03/15/2010
North and South Forks Pound River	Wise	Q13R	Sediment, TDS	03/02/2010
North Fork Holston River	Scott, Washington, Smyth, Bland, Tazewell, Russell	O11R	Mercury	03/01/2010
Bull Creek and Tributaries	Buchanan	Q08R	Sediment, TDS	02/15/2010
Levisa Fork Watershed including Garden Creek and Slate Creek	Buchanan	Q04R, Q06R, Q07R, Q08R	Bacteria, Sediment, PCBs	02/15/2010

TMDL Database

Current

Current TMDL Database Limitations

- **No centralized system and no user interface**
 - All data stored in raw Access database tables or regional spreadsheets (permit data)
- **No link to permit sources of record** (VA DEQ's CEDS permit module)
 - Equation and permit data tracked regionally in Excel spreadsheets
- **Very limited ability to track TMDL modifications**
- **No GIS capabilities**
 - TMDL watershed boundaries (polygons) only stored in TMDL reports

New TMDL Module Database

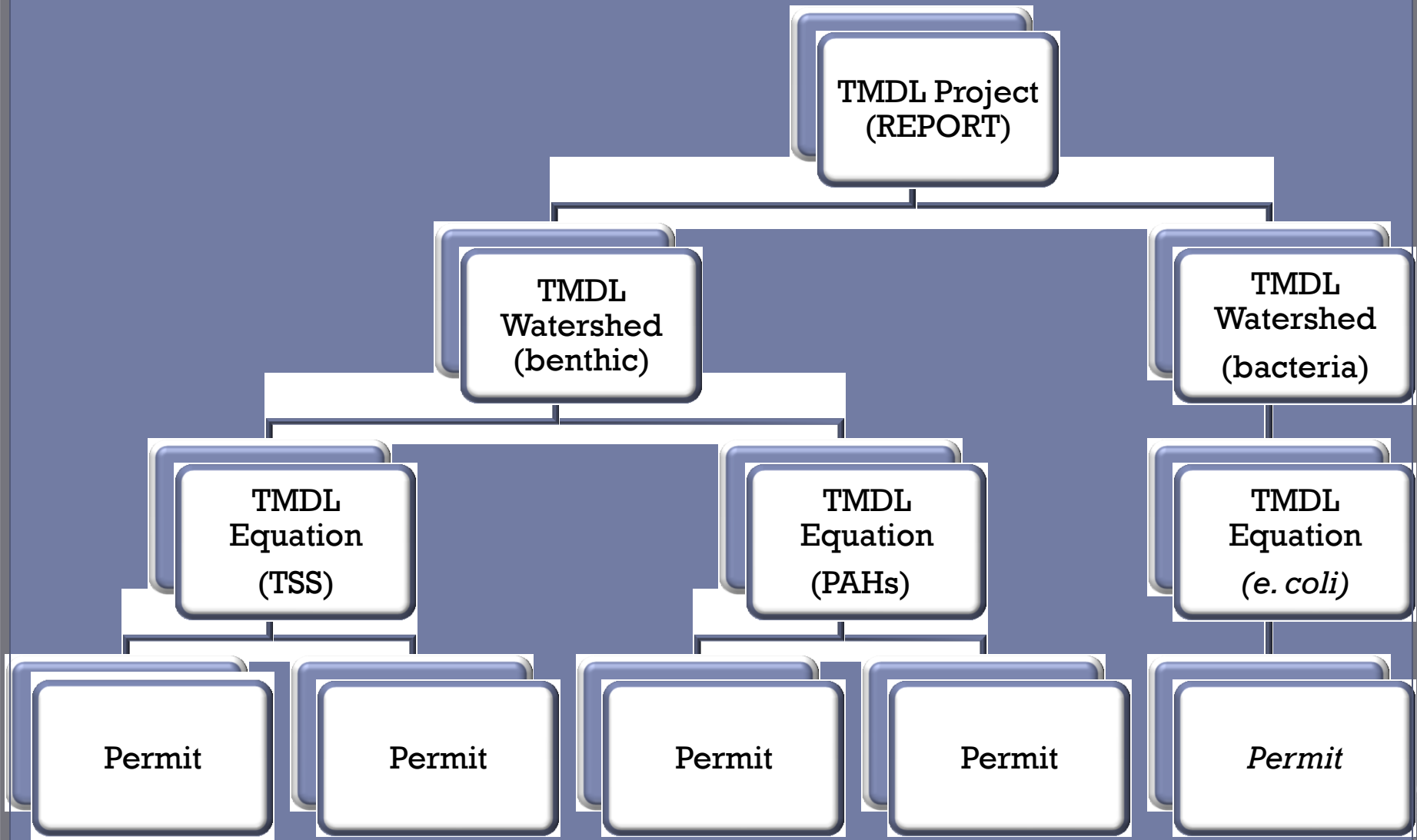
- **Centralized**, web browser-based database application
 - System introduces statewide consistency for tracking TMDL equations and modifications
- Part of the VA DEQ's Enterprise Database System known as CEDS
 - Integrated CEDS login (no new logins or passwords)
 - System has the ability to link directly to permit sources of record
- Integrated Database and GIS

New TMDL Module

GIS

- **Deeply integrated GIS component**
 - Phase I: spatial datasets for TMDL watersheds (and permits)
 - Assessment Units (ADB spatial data)
- Ability to move directly from **GIS -> Module** and **Module -> GIS**
- As part of this project, VA DEQ is leveraging existing GIS capabilities while also upgrading to current technology
- GIS built on the same technology and framework as VA DCR and other state agencies
 - **opportunities for data sharing**

TMDL Data Model



TMDL Database

Point of entry (search)

Welcome STMUELLER (Development | 0.0.0.0-dev)

Logout

TMDL

Search TMDL Projects

Project Number:

Status:

Contractor Name:

Impairment:

Permit Type:

Project Name:

Watershed Name:

Basin:

Pollutant:

Permit Number:



EPA Approved Date

From  To 

SWCB Approval Date

From  To 

Search

Start Over



TMDL Project Screen + reports tab

Welcome STMUELLER (Development | 0.0.0.0-dev)

Logout

TMDL

TMDL Projects

Save Delete Cancel

Project: 10212

* Indicates Required Fields

* Name: Bull Run - Demonstration

Status: Approved

Created By: AMUELLER on 4/14/2011

Contractor: L. Berger Group

Basin: Potomac River Basin

Updated By: AMUELLER on 4/26/2011

Due Date:

Description: Clean TMDL in Fairfax and Prince William Counties

Issues: Sediment

Report Watersheds

Pre-Approval

Comment Link: [Open Link](#)

Comment End Date: 1/1/2006

Draft Link: [Open Link](#)

Revised Draft Link:

Final Approved Link: [Open Link](#)

Submittals

EPA Submittal Date: 9/26/2006

EPA Approved Date: 9/26/2006





EPA Rationale Link: <http://www.deq.virginia.gov>

SWCB Approval Date: 7/27/2007

Addendum Link:

Modifications:

+ Add New

		Number	Link	EPA Approval Date	SWCB Approval Date	
		1	Open Link	09/26/2007	03/27/2008	
		2	Open Link	09/26/2010		

TMDL Project Screen

+ watersheds tab

Welcome STMUELLER (Development | 0.0.0.0-dev)

Logout

TMDL

TMDL Projects

[Save](#) [Delete](#) [Cancel](#)

Project: 10212

* Indicates Required Fields

* **Name:** Bull Run - Demonstration

Status: Approved

Created By: AMUELLER on 4/14/2011

Contractor: Louis Berger Group

Basin: Potomac River Basin

Updated By: AMUELLER on 4/26/2011

Due Date: 2006


Description: Urban TMDL in Fairfax and Prince William Counties

Comments: Sediment

[Report](#)

[Watersheds](#)

[+ Add New](#)

Action	Watershed	Impairment	Region	Description
	Bull Run	Benthic-Macroinvertebrate Bioassessments (Streams)	Northern Regional Office	NRO collaborated with PRO on TMDL development for this Project. (This shows up on internal application only.) 255 characters

TMDL Watershed Screen + Assessment Units tab

Welcome STMUELLER (Development | 0.0.0.0-dev)

Logout

TMDL

Search

Save Delete Cancel

Project: 10212 > Watershed: 00234

* Indicates Required Fields

* Name: Bull Run

* TMDL Schedule: 2006

Created By: TMDL_DBA on 1/26/2011

* Impairment: Benthic-Macroinvertebrate Bioass

Region: Northern Regional Office

Updated By: AMUELLER on 4/26/2011

Listed Year: 1998

Delisted Year:

Description:

NRO collaborated with PRO on TMDL development for this Project.

(This shows up on internal application only.) 255 characters

Comments:

Sediment TMDL

(This shows up on the external webpage.) 1000 characters

Map

Equations

Assessment Units

ADB Data Year: 2010

+ Add New

Action	ID305B	Water Name	Cause Group Code	Use Id	Use Description	Year
	VAN-A23R_BUL02A02	Bull Run	A23R-01-BEN	668.	Aquatic Life	2010

Reassign Watershed

TMDL Watershed Screen + equations tab

Welcome STMUELLER (Development | 0.0.0.0-dev) Logout

TMDL Watersheds

[Save](#) [Delete](#) [Cancel](#)

Project: 10212 > Watershed: 00234 * Indicates Required Fields

*** Name:** *** TMDL Schedule:** **Created By:** TMDL_DBA on 1/26/2011

*** Impairment:** **Region:** **Updated By:** AMUELLER on 4/26/2011

Listed Year: **Delisted Year:**

Description: T
(This shows up on internal application only.) 255 characters

Comments: T
(This shows up on the external webpage.) 1000 characters

[Map](#)

Equations **Assessment Units**

[+ Add New](#)

Action	Pollutant	Base WLA with FG	Current Permitted WLA	LA	TMDL	FGB	FG Included in TMDL	FG is Modeled
	Sediment	5986.8	5927.7	4807	11994.1	CUSTOM	Yes	Yes

Reassign Watershed

Project: [Reassign](#)

TMDL Equation + permit tab

Welcome STMUELLER (Development | 0.0.0.0-dev)

Logout

IMDL

TMDL Equations

Save Delete Cancel

Project: 10212 > Watershed: 00234 > Equation: 236

* Indicates Required Fields

* Pollutant: Sediment

Units: tons/yr

Base WLA without FG: 5926.9

Created By: STMUELLER on 4/13/2011

FG is Modeled: Yes

FGB: CUSTOM

Base WLA with FG: 5986.8

Updated By: AMUELLER on 4/26/2011

FG is Justified: No

FG Included in TMDL: Yes

Current Permitted WLA: 5927.7

MOS: 1199.4

LA: 4807

TMDL: 11994.1

FGB Other Description:

A load equivalent to half a percent (0.5%) of the Total TMDL Load (60 tons/year) was taken from the load allocations (LA) and added to the waste load allocation to account for future growth and the potential change in land-use from rural/open space to urban

Comments:

Don't enter commas in numbers in Eqn



Equation Calculator

Permits History

+ Add New

Action	Permit Type	Permit ID	Receiving Stream	Original WLA	Original Units	Current WLA	Current Units	% of WLA	%
	MS4	Aggregated		5360.2	tons/yr	5360.2	tons/yr	90.40 %	
	Concrete Product Facilities	VAG110094		1.62	tons/yr	1.62	tons/yr	0.00 %	
	VPDES IP	VA0087891	Chestnut Lick, UT	0.2	tons/yr	0.4	tons/yr	0.00 %	
	VPDES IP	VA0024988	Bull Run, UT	1.62	tons/yr	1.62	tons/yr	0.00 %	
	Domestic Sewage Discharge	VAG406171		0.046	tons/yr	0.046	tons/yr	0.00 %	
	VPDES IP	VA0024988	Bull Run, UT	97.42	tons/yr	97.42	tons/yr	1.60 %	
	VPDES IP	VA0087858	Bull Run, UT	5.8	tons/yr	5.8	tons/yr	0.10 %	
	Concrete Product Facilities	VAG110089		1.62	tons/yr	1.62	tons/yr	0.00 %	
	Domestic Sewage Discharge	VAG406236		0.046	tons/yr	0.046	tons/yr	0.00 %	

TMDL Equation "Calculator"

Welcome STMUELLER (Development | 0.0.0.0-dev)

Logout

TMDL

TMDL Equations

Save Delete Cancel

Project: 10212 > Watershed: 00234 > Equation: 236

* Indicates Required Fields

* Pollutant: Sediment

Units: tons/yr

Base WLA without FG: 5926.9

Created By: STMUELLER on 4/13/2011

FG is Modeled: Yes

FGB: CUSTOM

Base WLA with FG: 5986.8

Updated By: AMUELLER on 4/26/2011

FG is Justified: No

Current Permitted WLA: 5927.7

FGB Other Description: A load equivalent to half a the load allocations (LA) and the potential change in land-

Comments: Don't enter commas in numbers

Equation Playground

Equation Data










Base WLA with FG: 5986.8
Current Permitted WLA: 5927.7
Current FG Remaining 59.1
TMDL: 11994.1
Proposed WLA Delta (Increase/Decrease):

Submit

Proposed Permitted WLA = 5967.70
Proposed FG Remaining = 19.10
Delta's Percentage of Current FG Remaining = 67.68 %
Delta's Percentage of TMDL = 0.33 %

Equation Calculator

Permits History

Action	Permit Type	Permit ID	Re
	MS4	Aggregated	
	Concrete Product Facilities	VAG110094	
	VPDES IP	VA0087891	Chestn
	VPDES IP	VA0024988	Bull Run
	Domestic Sewage Discharge	VAG406171	
	VPDES IP	VA0024988	Bull Run, UT
	VPDES IP	VA0087858	Bull Run, UT
	Concrete Product Facilities	VAG110089	
	Domestic Sewage Discharge	VAG406236	

	0.046	tons/yr		0.046	tons/yr		0.00 %
	97.42	tons/yr		97.42	tons/yr		1.60 %
	5.8	tons/yr		5.8	tons/yr		0.10 %
	1.62	tons/yr		1.62	tons/yr		0.00 %
	0.046	tons/yr		0.046	tons/yr		0.00 %

Id New

A %

%

%

%

%

%

%

%

%

%

%

%

%

%

TMDL Permit

Welcome STMUELLER (Development | 0.0.0.0-dev)

Logout

TMDL

TMDL Permits

Save Delete Cancel

Project: 10212 > Watershed: 00234 > Equation: 236 > Permit: 236

* Indicates Required Fields

* Permit Type: VPDES IP

* Original Units: tons/yr

% of WLA: 0.00 %

Created By: STMUELLER on 4/13/2011

* Permit Number: VA0087891

* Original WLA: 0.2

% of TMDL: 0.00 %

Updated By: AMUELLER on 4/26/2011

Receiving Stream: Chestnut Lick, UT

Current Units: tons/yr

% Growth: 50.00 %

* Not All Outfalls Included: No

* Current WLA: 0.4

Is Included in TMDL: Yes

* Comments:

ex

TMDL Module: GIS

TMDL Search Feature



Virginia DEQ Home > VEGIS Home > Web Map

TMDL Watersheds (by name)

Map

Results

(3) TMDL Watershed Boundaries

[remove](#)

Tools

TMDL Watershed ID

☒ Mountain Run
[more info...](#)

TMDL Watershed ID: 00110

TMDL Project ID: 0064

Name: Mountain Run

Description: Culpeper Co. 58,000 acres; 7.58 mile impaired seg. Primary Contact Fecal + E.Coli; Mountain Run --> Flat Run --> Rappahannock R. --> Ches. Bay; (internal displayed <= 255 char.)

Region: NVRO

Comments: Ongoing IP efforts = Bacteria Primary Contact, Phase 1, year 2 of 10 yr plan; monitoring scheduled (2012-2013), (external displayed <= 1000 char.)

Listed Year: 1998

De-Listed Year: null

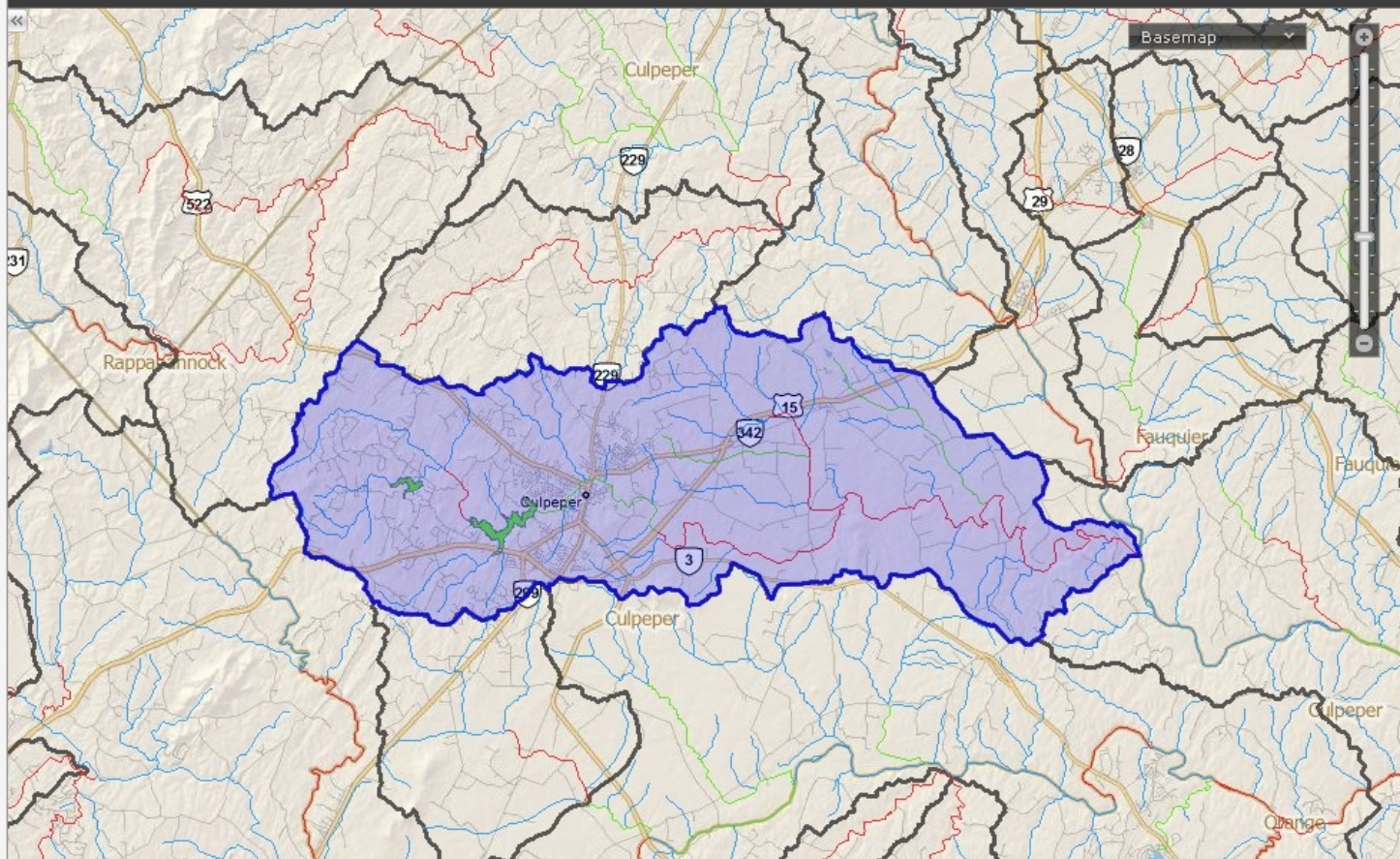
TMDL Schedule: 2001

Impairment ID: 217

☐ Mountain Run
[more info...](#)

☐ Mountain Run
[more info...](#)

Tools



1 of 1

Per Page: 10

2.5 mi

Deg Min Sec ^ Lat: 38° 31' 43.89"N Lon: 78° 02' 25.59"W

“What’s Nearby” feature

DEQ
VIRGINIA DEPARTMENT OF
ENVIRONMENTAL QUALITY

Virginia DEQ Home > VEGIS Home > Web Map

TMDL Watersheds (by name) Mountain Run Search

Map Results

(12) 2010 Rivers remove

Tools ID305B

- ☒ Flat Run more info...
- ☒ Jonas Run more info...
- ☒ Mountain Run more info...
- ☒ Mountain Run more info...
- ☒ Mountain Run more info...
- ☒ Mountain Run more info...
- ☒ Mountain Run more info...
- ☒ Mountain Run more info...
- ☒ Mountain Run more info...
- ☐ Rapidan River/Cedar Run more info...
- ☒ Unnamed tributary to Jonas Run more info...

Tools Print/Export Map Bookmarks

Basemap

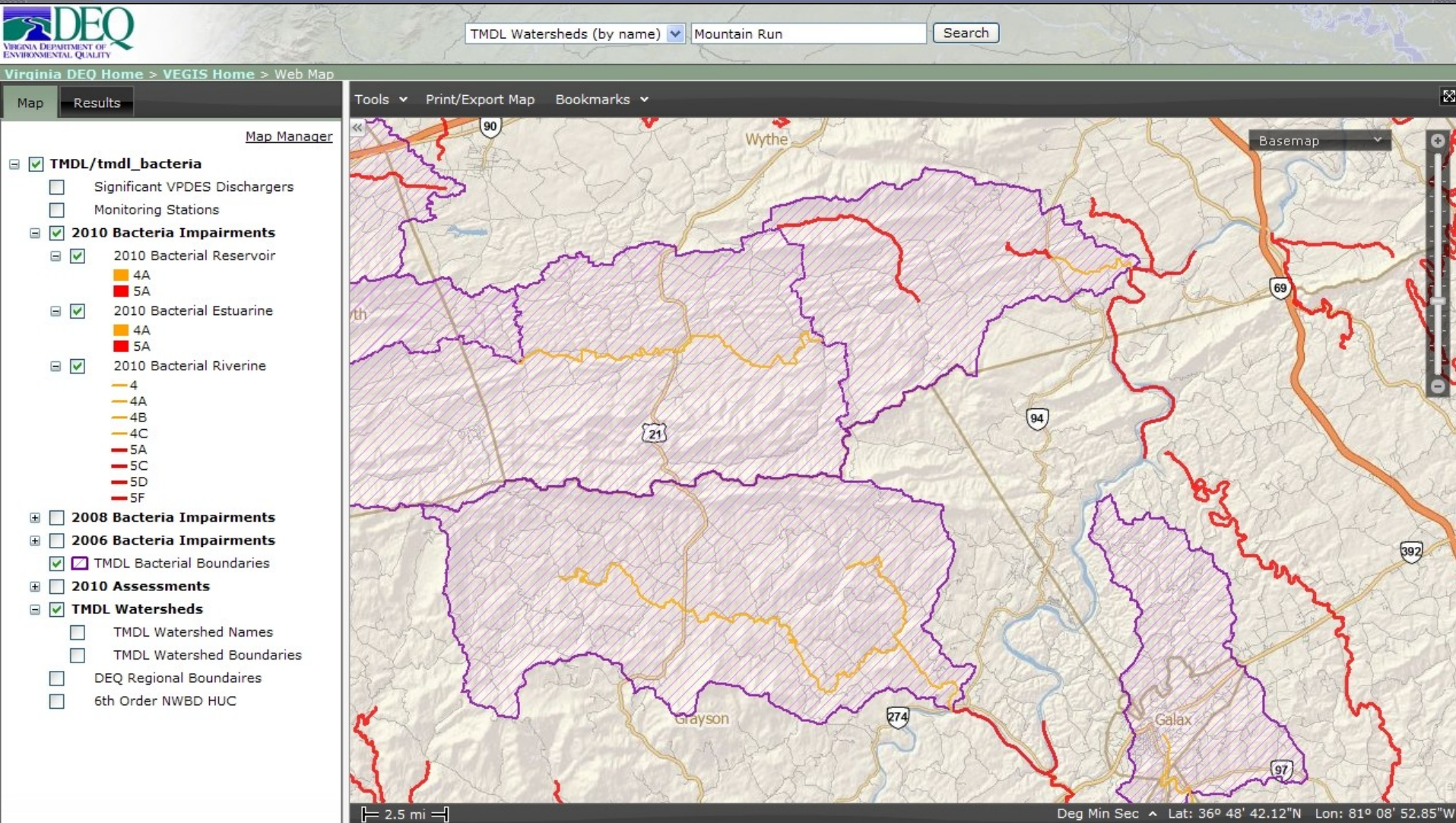
Find All:
2010 Rivers
Within:
.1 ft.
(Enter "0" to request adjacent features)
Search Save Buffer

details dimensions what's nearby?


1 of 2 Per Page: 10 2.5 mi

Deg Min Sec Lat: 38° 35' 49.56"N Lon: 78° 09' 31.58"W

Map Services: Bacteria TMDLs, Bacteria AUs



Swipe Tool

 **DEQ**
VIRGINIA DEPARTMENT OF
ENVIRONMENTAL QUALITY

Virginia DEQ Home > VEGIS Home > Web Map

TMDL Watersheds (by name) ▼ Powwhite Search

Map Results

(1) TMDL Watershed Boundaries remove

Tools TMDL Watershed ID ▼

☒ Powwhite Creek more info...

Tools ▼ Print/Export Map Bookmarks ▼

Swipe Horizontal Vertical ✕

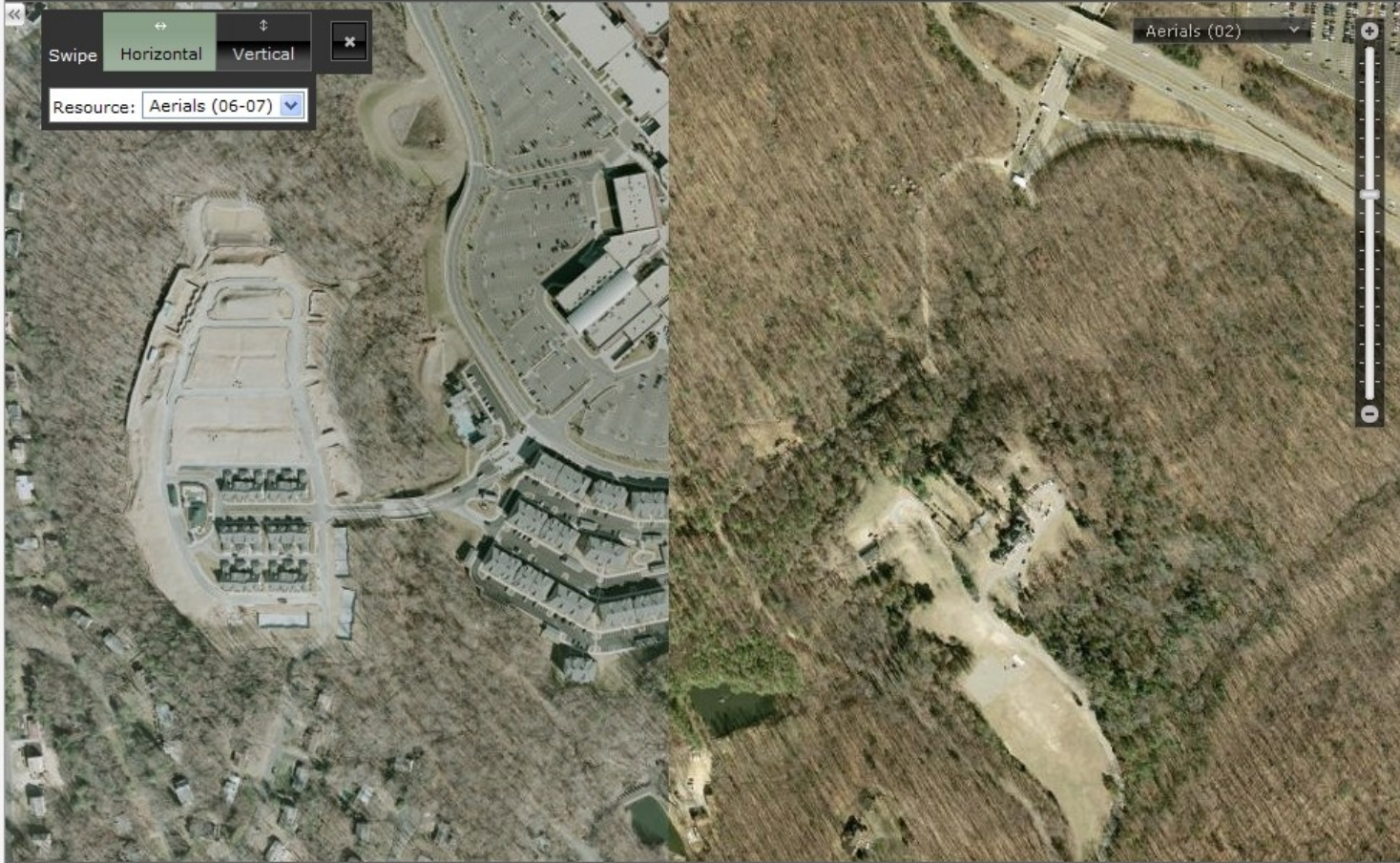
Resource: Aerials (06-07) ▼

Aerials (02) ▼

1 of 1 Per Page: 10

500 ft

Deg Min Sec ▼ Lat: 37° 32' 53.89"N Lon: 77° 34' 18.60"W



Questions?

Sandy Mueller, VA DEQ Watershed Programs

Sandra.Mueller@deq.virginia.gov

Phone: (804) 698-4324

<http://www.deq.virginia.gov/tmdl>

Jamie Christensen, WorldView Solutions Inc

jamie.christensen@worldviewgis.com

101 South 15th Street, Suite 104

Richmond, Virginia 23219

Phone: (804) 915-7628 Ext 104

www.worldviewsolutions.com